REMARKS/ARGUMENTS

I. Amendments

A. Priority

The Office Action acknowledges that the instant application "filed January 3, 2001, is a Continuation of Application numb er 08/948,958, filed October 10, 1997, which claims benefit of 60/028,687, filed October 18, 1996" (P. 2). Applicants have amended the first paragraph of the specification in accordance with the Office Action's acknowledgement. Accordingly, Applicants have complied with the conditions for claiming the benefit of an earlier filing date under 35 U.S.C. § 120.

B. No New Matter

The amendments are fully supported by disclosures from page 31, line 23 through page 34, line 19 in the specification. The new claims are also fully supported by disclosures from page 31, line 23 through page 34, line 19 and from page 38, line 21 through page 39, line 6 in the specification. Accordingly, the amendments and new claims do not constitute new matter.

C. SEQ ID Numbers

Applicants have identified nucleotide sequences with SEQ ID numbers in the specification. In the claims, the sequence CAGGTAAGT corresponds to residues # 1 through 9 of SEQ ID NO:10. The sequence TACTAAC corresponds to residues # 93 through 99 of SEQ ID NO:10. Finally, the sequence TTCTTTTTTTCTCTTCACAG corresponds to residues #102 through 122 of SED ID NO:10.

II. Rejections under 35 U.S.C. § 112

Claims 3 and 45-47 are rejected under 35 U.S.C. § 112, first paragraph. Claims 2-4, 45, 46, 48, and 49 are rejected under 35 U.S.C. § 112, second paragraph.

Applicants have deleted claims 2-4 and 45-49 and therefore made the rejections moot. Applicants respectfully request the rejections be withdrawn.

III. Rejections under 35 U.S.C. § 103(a)

Claims 1, 8, 9, 13 are rejected under 35 U.S.C. § 103(a). Applicants have cancelled claims 1, 8, 9, and 13 and thereby made the rejections moot. Accordingly, Applicants respectfully request the rejections be withdrawn.

IV. Objections

The Office Action objects to claims 5-7, 10-12 and 14-16 as being dependent upon rejected base claims. However, the Office Action concedes that claim 5-7, 10-12 and 14-16 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. In light of the Office Action's concession and to obtain an early issuance of a patent, Applicants have rewritten claim 5 into an independent claim by incorporating all the limitations of claim 1 and/or limitations of claims 6 or 7. By the same token, claim 10 is rewritten into an independent claim incorporating all the limitations of claim 8 and 9, and/or limitations of claims 11 or 12. Furthermore, claim 14 is rewritten into an independent claim incorporating all the limitations of claim 13, and/or limitations of claims 15 or 16. Accordingly, Applicants respectfully request that the objections be withdrawn.

In view of the foregoing, the claims pending in the application are in condition for allowance. A Notice of Allowance is, therefore, respectfully requested.

Respectfully submitted,
Perkins Coie LLP

Date: 1/31/03

James J. Zhu, Ph.D.
Registration No.52,396

Correspondence Address:

Perkins Coie LLP
Patent – LA
P.O. Box 1208
Seattle, WA 98111-1208
Phone: (310) 788-9900
Fax: (310) 788-3399

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Cancelled) A plasmid for expression of recombinant eucaryotic genes comprising:

a first transcription unit comprising a first transcriptional control sequence transcriptionally linked with a first 5'-untranslated region comprising a first synthetic intron, a first coding sequence, and a first 3'-untranslated region/poly (A) signal, wherein said first synthetic intron is between said control sequence and said first coding sequence; and

a second transcription unit comprising a second transcriptional control sequence transcriptionally linked with a second 5' -untranslated region comprising a second synthetic intron, a second coding sequence, and a second 3' -untranslated region/poly (A) signal, wherein said second synthetic intron is between said control sequence and said second coding sequence.

2. (Cancelled) The plasmid of claim 1, wherein the first and second 5' untranslated regions are deficient in G, but rich in C and A residues.

3. (Cancelled) The plasmid of claim 2, wherein the first and second 5' untranslated regions are about 54 nucleotides long exclusive of the first and second synthetic introns.

4. (Cancelled) The plasmid of claim 2, wherein the first and second 5' untranslated regions are lacking in AT-rich sequences.

5. (Twice amended) A plasmid for expression of recombinant eucaryotic genes comprising:

a first transcription unit comprising a first transcriptional control sequence transcriptionally linked with a first 5'-untranslated region comprising a first synthetic intron, a first coding sequence, and a first 3'-untranslated region/poly (A) signal, wherein said first synthetic intron is between said first transcriptional control sequence and said first coding sequence; and

a second transcription unit comprising a second transcriptional control sequence transcriptionally linked with a second 5'-untranslated region comprising a second synthetic intron, a second coding sequence, and a second 3'-untranslated region/poly (A) signal, wherein said second synthetic intron is between said second transcriptional control sequence and said second coding sequence,

[The plasmid of claim 1,] wherein the first and second synthetic introns both comprise 5' splice sites having a sequence CAGGTAAGT, and/or branch points having a sequence TACTAAC, and/or 3' splice sites having a sequence TTCTTTTTTTCTCTTCACAGG.

6. (Cancelled) The plasmid of claim 1 wherein the first and second synthetic introns both comprise branch points having a sequence TACTAAC.

7. (Cancelled) The plasmid of claim 1wherein the first and second synthetic introns both comprise 3' splice sites having a sequence TTCTTTTTTTCTCTTCACAGG.

8. (Cancelled) A plasmid for expression of recombinant eucaryotic genes, comprising an intron having variable splicing, a first coding sequence, and a second coding sequence.

9. (Cancelled) The plasmid of claim 8, further comprising:

a transcriptional control sequence transcriptionally linked with a first coding sequence and a second coding sequence;

a 5'-untranslated region;

an intron 5' to said first coding sequence;

an alternative splice site 3' to said first coding sequence and 5' to said second coding sequence; and

a 3'-untranslated region/poly(A) signal.

10. (Twice amended) A plasmid for expression of recombinant eucaryotic genes, comprising an intron having variable splicing, a first coding sequence, and a second coding sequence, wherein the plasmid comprises:

a transcriptional control sequence transcriptionally linked with a first coding sequence and a second coding sequence;

a 5'-untranslated region;

an intron 5' to said first coding sequence;

an alternative 3' splice site located between the first and second coding sequence; and

a 3'-untranslated region/poly(A) signal,

[The plasmid of claim 8,] wherein the intron comprises a 5' splice site having a sequence CAGGTAAGT, and/or a branch point having a sequence TACTAAC, and/or a 3' splice site having a sequence TTCTTTTTTTCTCTTCACAGG.

11. (Cancelled) The plasmid of claim 8 wherein the intron comprises a branch point having a sequence TACTAAC.

12. (Cancelled) The plasmid of claim 8 wherein the intron comprises a 3' splice site having a sequence TTCTTTTTTTCTCTTCACAGG.

13. (Cancelled) A plasmid for expression of recombinant eucaryotic genes comprising:

a transcriptional control sequence transcriptionally linked with a first coding sequence, an IRES sequence, a second coding sequence, and a 3' -untranslated region/poly(A) signal, wherein said IRES sequence is between said first coding sequence and said second coding sequence; and

a synthetic intron between said transcriptional control sequence and said first coding sequence.

14. (Twice amended) A plasmid for expression of recombinant eucaryotic genes comprising:

a transcriptional control sequence transcriptionally linked with a first coding sequence, an IRES sequence, a second coding sequence, and a 3'-untranslated region/poly(A) signal, wherein said IRES sequence is between said first coding sequence and said second coding sequence; and

a synthetic intron between said transcriptional control sequence and said first coding sequence,

[The plasmid of claim 13,] wherein the synthetic intron comprises a 5' splice site having a sequence CAGGTAAGT, and/or a branch point having a sequence TACTAAC, and/or a 3' splice site having a sequence TTCTTTTTTTCTCTTCACAGG.

15. (Cancelled) The plasmid of claim 13 wherein the synthetic intron comprises a branch point having a sequence TACTAAC.

16. (Cancelled) The plasmid of claim 13 wherein the synthetic intron comprises a 3' splice site having a sequence TTCTTTTTTTCTCTTCACAGG.

45. (Cancelled) The plasmid of claim 1, wherein the synthetic intron is about 118 nucleotides long.

46. (Cancelled) The plasmid of claim 8 wherein the first and second synthetic introns are about 118 nucleotides long.

47. (Cancelled) The plasmid of claim 13, wherein the intron is about 118 nucleotides long.

48. (Cancelled) The plasmid of claim 1 wherein the fist and second synthetic introns are OPTIVS8B.

49. (Cancelled) The plasmid of claim 13 wherein the synthetic intron is OPTIVS8B.